

AUGUST - 2006

[KP 744]

Sub. Code : 4186

SECOND B.Pharm. DEGREE EXAMINATION.

Paper VI — BIOSTATISTICS AND COMPUTER APPLICATIONS

Time : Three hours

Maximum : 90 marks

**Theory : Two hours and
forty minutes**

Theory : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer Section A and Section B Separately.

SECTION A

(BIOSTATISTICS)

I. Write any ONE of the following : (1 × 20 = 20)

1. Discuss the various tools of statistical inference that you have studied.

2. Two different formulation of a tablet were compared for their rate of dissolution. The percentage dissolution after 15 minutes for each formulation for a sample of 10 tablets is given below :

Formulation A : 73, 78, 75, 79, 70, 74, 84, 80, 83, 67

Formulation B : 64, 79, 71, 68, 79, 60, 62, 78, 73, 70

Determine if the dissolution rates of the two formulations differ at a significance level of 5% and 10% (Given : $t = 2.10$ for 18 degrees of freedom at 5% significance level, and $t = 1.73$ at 10% significance level.)

II. Answer any THREE of the following : (3 × 5 = 15)

1. What are the various measure of dispersion. Illustrate their computation.

2. Write short notes on sampling theory.

3. A bag contains 8 white and 10 black balls. Two balls are drawn in succession. What is the probability that the first is white and second is black.

4. Briefly illustrate the use of charts and graphs in data analysis.

5. What is the least squares regression equation? Explain the theoretical regression formula.

SECTION B

(COMPUTER APPLICATIONS)

I. Answer any ONE of the following : (1 × 20 = 20)

1. Elaborate on the various operating systems. Write a C program illustrating the use of decision making and branching statements.

2. Discuss the components of MS office package, their applications and usage.

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II. Answer any THREE of the following : (3 × 5 = 15)

- 1. Illustrate the 'for' statement in C programming language.**
 - 2. Write short notes on basic components of computer and their functions.**
 - 3. Enlist some of the pharmaceutical applications of computers.**
 - 4. Write short notes on world wide web and search engines.**
 - 5. Discuss some string handling functions in C programming language.**
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FEBRUARY - 2007

[KQ 744]

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Theory : 70 marks

M.C.Q. : Twenty minutes

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Answer Section A and Section B separately

SECTION A

(BIOSTATISTICS)

I Write any ONE of the following : (1 × 20 = 20)

1. Given the distance (Km) travelled by walk for 10 men along with the time elapsed in hours :

Time(x)	2	2	3	4	4	5	6	7	8	9
Distance (y)	10	11	12	13	14	15	20	18	22	25

Calculate the regression equation. Estimate the time taken for a person who walks for 5.5 hours from your findings.

2. Given below is the gain in weight of pigs fed on two diets A and B.

Diet A 25 32 30 34 24 14 32 24 30 31 35 25 - -

Diet B 44 34 22 10 47 31 40 32 35 18 21 35 29 22

Test if the two diets differ significantly as regards their effect on increase in weight.

(Given : t for 25 d.f. at 0.05 = 2.06)

II Answer any THREE of the following : (3 × 5 = 15)

1. Let 5 men and 3 women out of 1000 are colour blind. Assuming males and females in equal proportion, what is the probability that a randomly chosen colour blind person is male?

2. Calculate the mean, median and mode of the following data :

44, 55, 58, 62, 65, 67, 69, 70, 73, 74, 74, 74, 77, 79, 81, 83, 89, 93, 96, 99

3. Determine the standard deviation and coefficient of variation for the following data :

24, 25, 28, 27, 28,

4. Write short notes on the different types of Graphs.

5. Write short notes on sampling methods you have studied.

FEBRUARY - 2007

SECTION B

(COMPUTER APPLICATIONS)

I Write any ONE of the following : (1 × 20 = 20)

1. Discuss the features and applications of MS Excel including graphs and charts.

2. Write a C program for finding the minimum, maximum and mean of a set of given numbers as input.
Note : The program should seek the inputs from the user on execution.

II Answer any THREE of the following : (3 × 5 = 15)

1. Discuss the *switch* statement in C and its applications.

2. Write notes on the Internet and its features briefly.

3. What are the components of a computer system and their functions.

4. Outline the computer applications relevant to the field of Pharmacy

5. Discuss the various operators in C.

[KR 744]**Sub. Code : 4235****SECTION B****SECOND B.Pharm. DEGREE EXAMINATION.****Paper VI — BIOSTATISTICS AND COMPUTER APPLICATIONS**

Time : Three hours

Maximum : 90 marks

Theory : Two hours and
forty minutes

Theory : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer Section A and Section B separately.

SECTION A**(BIOSTATISTICS)**

- I. Write any ONE of the following : - (1 × 20 = 20)
 1. Discuss the different sampling methods.
 2. Discuss the various measures of central tendency.
- II. Answer any THREE of the following : (3 × 5 = 15)
 1. Discuss chi-square tests for proportions.
 2. Discuss application of linear regression.
 3. Discuss bar charts and pie charts.
 4. Write short notes on binomial distribution.
 5. Discuss paired sample *t*-test.

(COMPUTER APPLICATIONS)

- I. Answer any ONE of the following : (1 × 20 = 20)
 1. Describe the basic components of computers. Discuss their types and functions.
 2. Discuss various control structures and loops available in 'C' language.
- II. Answer any THREE of the following : (3 × 5 = 15)
 1. Write a 'C' program to find average of given numbers.
 2. Write short notes on operating system.
 3. Write notes on algorithm and flowchart.
 4. Describe various functionalities of Internet.
 5. Discuss the advantages and uses of MS Word.

February-2008

[KS 744]

Sub. Code : 4235

SECOND B. Pharm. DEGREE EXAMINATION.

Paper VI — BIOSTATISTICS AND COMPUTER
APPLICATIONS

Q.P.Code: 564235

Time : Three hours

Maximum : 90 marks

Descriptive : Two hours and
forty minutes

Descriptive : 70 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer Section A and Section B separately.

SECTION A

(BIOSTATISTICS)

I. Answer any ONE of the following: (1 × 20 = 20)

1. A certain drug was administered to 450 persons out of 800 persons in a certain locality to test its efficiency against typhoid. The results are given below in the table.

	Infection	No Infection
Drug	200	300
No Drug	250	50

Find out the effectiveness of the drug against the disease.

(Hints: The table value of χ^2 at 5% level of significance for 1 degree of freedom is 3.84)

2. Write and explain the types of diagrams and graphs.

II. Answer any THREE of the following: ($3 \times 5 = 15$)

1. The probability that India wins a cricket test match against England is given to be $1/3$. If India and England play three test matches, then what is the probability that.

(a) India will lose all the three matches

(b) India will win at least one test match.

2. Find the regression equations from the following data

X 6 2 10 4 8

Y 9 11 5 8 7

3. Discuss the types of correlation. Explain with example.

4. Write short notes on random sampling methods.

5. What are the relative merits and demerits of averages?

SECTION B

(COMPUTER APPLICATIONS)

I. Answer any ONE of the following: ($1 \times 20 = 20$)

1. Discuss the computer networks and internet usage?

2. (a) Explain RAM, ROM, PROM, EPROM and EEPROM.

(b) Explain the following string functions: strcat, strcmp, strlen, strncmp, strncpy.

II. Answer any THREE of the following: ($3 \times 5 = 15$)

1. Discuss the advantages and uses of MS Excel.

2. Define flow chart. Explain the Symbols used in flow chart.

3. What is meant by search engine? How will you use the search engine?

4. Define recursive function. Write a C program to find $N!$ using recursive function.

5. Enlist some of the pharmaceutical applications of computers.

August 2008

[KT 744]

Sub. Code : 4235

SECOND B.Pharm. DEGREE EXAMINATION.

Paper VI — BIOSTATISTICS AND COMPUTER
APPLICATIONS

Q.P. Code : 564235

Time : Three hours

Maximum : 90 marks

Answer Section A and Section B separately.

Use of calculator and statistical tables are permitted.

SECTION A

(BIOSTATISTICS)

I. Essay :

Answer any ONE of the following : (1 × 20 = 20)

1. In a study to find out the association between the distance from the health center and the number of antenatal visits, the following data are obtained. Find the correlation coefficient.

Distance (km) : 2 2 2 4 5 6 6 8 9 10

Number of visits : 6 6 5 5 5 4 4 4 3 1

2. Index of brightness of 50 boys and 50 girls gave the following values :

Sex	Mean	S.D.
Boys	91.2	37.0
Girls	90.8	31.2

Find 95% confidence limits of mean index of brightness on both sex.

II. Short questions :

Answer any FOUR questions : (4 × 5 = 20)

1. (a) What is meant by positively skewed distribution?

(b) The diastolic blood pressure of 10 individuals were 82, 76, 80, 78, 72, 96, 76, 76, 86, 88 (measured on mm Hg). Calculate mean, median and mode.

2. Explain the method of computing Harmonic mean for a grouped data.

3. Uses of regression analysis

4. (a) Define probability.

(b) A bag contains 7 white, 6 red and 5 black balls. Two balls are drawn at random. Find the probability that they will be both white.

5. Uses of paired *t* test.

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III. Short answers : (2 × 2.5 = 5)

Answer any TWO questions.

1. Standard error
2. Empirical relation between mean, median and mode
3. Less than ogive and more than ogive.

SECTION B

(COMPUTER APPLICATIONS)

I. Essay :

Answer any ONE of the following : (1 × 20 = 20)

1. Define Network. Briefly explain the types of network and network topologies with respective diagrams.
2. Write a note on the programming language C. Write down the syntaxes of Decision Making, Branching and Looping statements.

II. Short notes :

Answer any FOUR of the following : (4 × 5 = 20)

1. List out the Basic operations of a computer.
2. Define operating system and write down its functions.

3. Define Multimedia and brief out its contents.

4. Briefly explain the Basic components of Microsoft Word.

5. Brief out the different types of slide master.

III. Short answers : (2 × 2.5 = 5)

Answer any TWO of the following

1. Write down the Basic components of a computer.
 2. Write down the types of Telecommunication Networks.
 3. Define Header and Footer and its uses.
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February 2009

[KU 744]

Sub. Code: 4235

SECOND B.PHARM. DEGREE EXAMINATION

(Regulation 2004)

Candidates Admitted from 2004-05

Paper VI – BIOSTATISTICS AND COMPUTER APPLICATIONS

Q.P. Code : 564235

Time : Three hours

Maximum : 90 marks

Answer Section A and B SEPARATELY

Use of calculator and statistical tables are permitted

**SECTION – A
(BIOSTATISTICS)**

I. Essay Questions : Answer any ONE question. (1 x 20 = 20)

1. What do you mean by “measures of central tendency”? Explain with the help of examples.
2. What is sampling? Explain the important methods of sampling commonly used.

II. Write Short Notes : Answer any FOUR questions (4 x 5 = 20)

1. Draw simple bar and pie diagram for the following gross expenditure rupees in crores of a company ABC for the years 2003-2006.

Years	2003	2004	2005	2006
Expenditure (in crores)	120	90	80	110
2. Explain the procedure for doing chi-square test?
3. Explain any three types of charts with examples.
4. Compute standard deviation for the following data.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	3	8	15	20	25	10
5. Explain the stratified random sampling method. 6. A bag contains 5 white, 6 Red and 7 Green balls from which 3 balls are drawn at random find the probability that balls are:
 - a) 1 white, 1 Red and 1 Green balls.
 - b) All three are white balls.

III. Short Answers: Answer any TWO questions (2X2.5 =5)

1. Define statistics.
2. What is the mean, median and mode value for the following observations? 7, 12, 9, 15, 10, 12
3. What is correlation coefficient and rank correlation coefficient?
4. What is the meaning of an Ogive graph? Explain briefly:

SECTION – B
(COMPUTER APPLICATIONS)

I. Essay Questions : **Answer any ONE question.** **(1 x 20 = 20)**

1. **a)** Explain arrays with its types.
 b) Write a C program to perform matrix addition for a given 2 X 2 matrix.
2. Explain the various types of user defined functions in C – language.

II. Write Short Notes : **Answer any FOUR questions** **(4 x 5 = 20)**

1. What are the characteristics of a computer?
2. Explain Raster scan and Random scan systems in computer graphics.
3. What are the character sets available in c language?
4. Explain switch and Go To statements.
5. Explain mail- merge concepts in Ms-word.
6. Explain the concepts of browser and e-mail.

III. Short Answers: **Answer any TWO questions** **(2 x 2.5 = 5)**

1. Define booting process.
2. What is the difference between RAM and ROM?
3. Define the terms network and internet.
4. What are the uses of Ms-Office tools?

August 2009

[KV 744]

Sub. Code: 4235

SECOND B.PHARM. DEGREE EXAMINATION

(Regulation 2004)

Candidates Admitted from 2004-05

Paper VI – BIOSTATISTICS AND COMPUTER APPLICATIONS

Q.P. Code : 564235

Time : Three hours

Maximum : 90 marks

Answer Section A and B SEPARATELY

Use of calculator and statistical tables are permitted

SECTION – A

(BIOSTATISTICS)

I. Essay Questions : Answer any ONE question (1 x 20 = 20)

1. Marks of statistics and computer science of B.Pharm students has the regression equations. $5X - 6Y + 90 = 0$ and $15X - 8Y - 130 = 0$. Find the means of two subjects and the correlation coefficient.
2. The life time of electric bulb for a random sample of 10 from a large consignment had the following data

Bulb	1	2	3	4	5	6	7	8
Life (in 1000 hours)	4.9	4.3	5.4	5.2	4.8	4.7	4.9	5.1

Is the claim of the manufacturer that the average lifetime of bulbs 4000 hours true.

II. Write Short Notes : Answer any FOUR questions (4 x 5 = 20)

1. Discuss about scatter diagram.
2. Compute Harmonic mean 10,14,20,40,19.
3. Write about simple random sampling.
4. A lunch box contains 7 gulab jamoons and 6 laddus. If 2 are selected at random. What is the probability that both are Laddus?
5. What are the application of chi-square (X^2) test?

III. Short Answers: Answer any TWO questions (2 x 2.5 = 5)

1. Histogram.
2. Questioners.
3. Dispersion plot.

SECTION – B
(COMPUTER APPLICATIONS)

I. Essay Questions : **Answer any ONE question.** **(1 x 20 = 20)**

1. Discuss in detail about various computer graphic display devices and graphical input/output devices.
2. **a)** What are the various types of operators available in 'C'?
b) A Pharmacy company has the following salary structure for a staff.

Basic Pay (BP)	= Rs. 20,000/-
Dearness Allowance (DA)	= 25%.
House Rent Allowance (HRA)	= 15%.
City compensation Allowance (CCA)	= 20%.
Conveyance (CO)	= 10%.

Write a 'C' program to calculate gross salary.
(Gross Salary = BP+DA+HRA+CCA+CO).

II. Write Short Notes : **Answer any FOUR questions** **(4 x 5 = 20)**

1. Briefly explain about memory and secondary storage devices.
2. Give the syntax of various looping structures available in 'C'.
3. Discuss on custom animation tools available in MS-Power Point.
4. Brief out the types of network.
5. What do you understand by the term multimedia?

III. Short Answers: **Answer any TWO questions** **(2 x 2.5 = 5)**

1. What is ATM?
2. Give the purpose of CD-ROM.
3. What are the preventions to be taken care in order to the system not to get affected by 'VIRUS'.

February 2010

[KW 744]

Sub. Code: 4235

SECOND B.PHARM. DEGREE EXAMINATION

(Regulation 2004) Candidates Admitted from 2004-05

Paper VI – BIOSTATISTICS AND COMPUTER APPLICATIONS

Q.P. Code : 564235

Time : Three hours

Maximum : 90 marks

Answer Section A and B SEPARATELY

Use of calculator and statistical tables are permitted

SECTION – A

(45 marks)

(BIOSTATISTICS)

I. Essay Questions : Answer any ONE question. (1 x 20 = 20)

1. From the following table details of 200 patient of a disease is given. Find whether the proposed treatment is superior to the conventional one.

	Number of Patients		
	In favour	Against	Total
Conventional	45	25	70
Proposed	90	40	200

2. Eight students in B.Pharm are ranked by 3 lecturers as below: use rank correlation co-efficient to find out which pair of lecturers have nearest opinion.

Lecturer I	4	5	7	1	3	2	6	8
Lecturer II	6	5	4	2	1	3	8	7
Lecturer III	8	1	3	5	7	4	2	6

II. Write Short Notes : Answer any FOUR questions (4 x 5 = 20)

1. What are the scope of statistics in medicine and pharmacy?
2. Discuss about Ogives.
3. Obtain standard deviation: 40, 35, 50, 47, 34, 29.
4. Brief about multistage random sampling.
5. Obtain regression line of X and Y.

X	4	6	8	10	2
Y	9	11	6	5	7

III. Short Answers: Answer any TWO questions (2 x 2.5 =5)

1. Pie diagram.
2. Geometric mean.
3. Conditional probability.

SECTION – B
(COMPUTER APPLICATIONS)

I. Essay Questions : Answer any ONE question. (1 x 20 = 20)

1. How computers are assisted in drug design.
2. **a)** What is an array and give its type?
b) Write a 'C' program to do matrix manipulation.

II. Write Short Notes : Answer any FOUR questions (4 x 5 = 20)

1. List the symbols available in flow chart and its use.
2. Write short notes on CRT.
3. Discuss about presentation tools available in MS office package.
4. Explain the concepts of networks.
5. What is Bluetooth? Discuss.

III. Short Answers: Answer any TWO questions (2 x 2.5 =5)

1. What is Electronic - Mail?
2. Differentiate hardware and Software.
3. How animation is useful for pharmacy?

SECOND B.PHARM. DEGREE EXAMINATION

**(Regulation 2004)Candidates Admitted from 2004-05
and 2009-2010 Lateral Entry Batch)**

Paper VI – BIOSTATISTICS AND COMPUTER APPLICATIONS

Q.P. Code : 564235

Time : Three hours

Maximum : 90 marks

Answer Section A and B SEPARATELY

Use of calculator and statistical tables are permitted

**SECTION – A
(BIOSTATISTICS)**

I. Essay Questions : Answer any ONE question. (1 X 20 = 20)

1. Find out the coefficient of correlation in the following case height of father (in inches) and son.

Father	65	66	67	67	68	69	71	73
Son	67	68	64	68	72	70	69	70

2. In a sample of 120 persons in a village, 76 persons were administered a new drug for Preventing influenza out of whom 24 persons were attacked by influenza. Amongst those not administered the new drug 12 persons were not affected by influenza. Use Chi-square test for finding out whether the new drugs effective? (5% level is 3.84)

II. Write Short Notes : Answer any FOUR questions. (4X 5 = 20)

1. Define types of data graphics.
2. Define Simple Random Sampling method.
3. Discuss about testing of hypothesis procedure.
4. In a box there are 5 Asprin, 6 Analgin and 10 Paracetamol tablets. If one tablet is chosen at random find the probability that i) It is Asprin ii) It is not Paracetamol
5. Discuss the measure of central tendency.

III. Short Answers: Answer any TWO questions. (2X2.5 =5)

1. Chi - Square test
2. Type of Errors.
3. Regression lines

(COMPUTER APPLICATIONS)

1. Draw the block diagram of digital computer and explain all the components.
2. a) Compare the while loop and do – while loop.
b) Write a program to find the factorial of given number.

1. Define various types of decision making statements.
2. Discuss about Arrays declaration.
3. Define network of LAN and WAN.
4. Define Multimedia application.
5. Discuss the MS-Office Packages advantages.

1. What is ROM and RAM memory?
2. What is Operating System?
3. Define Anti virus.

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FEBRUARY 2011

[KY 744]

Sub. Code: 4235

**SECOND B.PHARM. DEGREE EXAMINATION
(Regulation 2004) Candidates Admitted from 2004-05
and 2009-2010 Lateral Entry Batch)**

Paper VI – BIOSTATISTICS AND COMPUTER APPLICATIONS

Q.P. Code : 564235

Time : Three hours

Maximum : 90 marks

Answer Section A and B SEPARATELY

Use of calculator and statistical tables are permitted

**SECTION – A
(BIOSTATISTICS)**

I. Essay Questions :

Answer any ONE question

(1 x 20 = 20)

1. A ball is drawn at random from a box containing 6 red balls, 3 white balls and 7 blue balls. Find the probability that the ball is
a) red b) white c) blue d) not blue e) red or white.
2. Below are given the gain in weights (lbs) of cows fed on two diets x and y:

Gain in weight (lbs)

Diet x: 25 32 30 32 24 14 32

Diet y: 24 34 22 30 42 31 40 30 32 35

Test at 5% level, whether the two diets differ as regards their effect on mean increase in weight. (Tabulated value of 't' for 15 degree of freedom at 5%= 1.573).

II. Short notes :

Answer any FOUR questions

(4 x 5 = 20)

1. What are the scope of statistic in medicine and pharmacy?
2. Write notes on systematic random sampling.
3. Calculate the mean, median and mode for the following data of 10 Hb level
10.1 12.8 10.4 8.7 11.4 11.4 10.2 7.3 10.1 12.1
4. Explain correlation and regression.
5. Name the different types of diagrams and explain any one of them.

III. Short Answers:

Answer any TWO questions.

(2 x 2.5 =5)

1. Harmonic mean.
2. Less than Ogive and more then Ogive.
3. Range.

(PTO)

SECTION – B
(COMPUTER APPLICATIONS)

I. Essay Questions :

Answer any ONE question

(1 x 20 = 20)

1. a) Define Operating system and its functionalities.
b) Explain the following operating system i) MSDOS ii) Unix.
2. Describe the decision making and branching statements in 'C' with examples.

II. Short notes :

Answer any FOUR questions

(4 x 5 = 20)

1. List out the characteristics of computers.
2. Write a C program to find factorial of given number.
3. Define browser and email.
4. Write short notes on MSOFFICE package.
5. Define flowchart. Explain the symbols used in flowchart.

III. Short Answers:

Answer any TWO questions.

(2 x 2.5 =5)

1. Define Mouse.
2. List out the string handling functions used in 'C'.
3. What is the difference between primary and secondary memory.
